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ABSTRACT

This survey of the occupational education delivery services in Queens, New York, represents an initial step in the development of a borough-wide plan. The report provides a basis for assessing the potential training resources within the present school structure, as well as a detailed outline of the present scope of services. Elements which have been included in this study include: a review of population trends in the entire borough and in the high school population in particular for the period 1976 to present; population flow (migration and out-migration); special geographic features; transportation facilities; labor market information specific to the borough; and assessments of the scope and nature of local business. A detailed analysis of present facility and training resources is provided. (Author/RLV)

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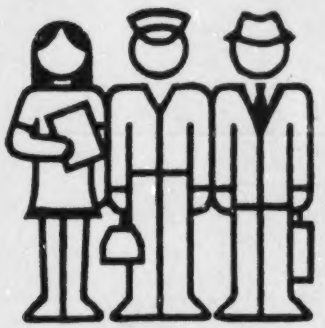

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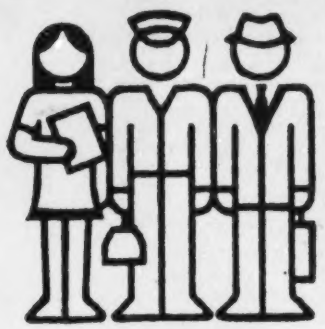

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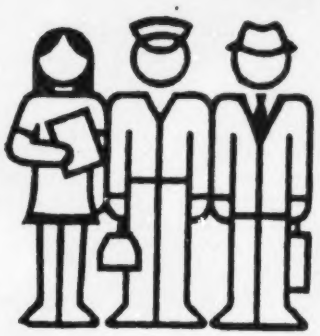

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CENTER FOR
CAREER AND OCCUPATIONAL EDUCATION

Board of Education of the City of New York
Division of Educational Curriculum and Instruction

A SURVEY OF
THE OCCUPATIONAL EDUCATION DELIVERY SYSTEM
in the
BOROUGH OF QUEENS

May, 1979

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Acknowledgements

The surveys of each of the five boroughs were undertaken in recognition of the distinctiveness and individuality of the populations, the geography, and labor market needs of each of the boroughs. The size and diversity of New York City is such that a borough-by-borough data base is a necessity for the development of City-wide needs base and ultimately a Regional Plan.

The Borough surveys were initiated and implemented by the Unit for Planning, Evaluation and Research. Major responsibility for the development of the five documents was borne by Leonard Bozza and Eileen Pollack.

Other members of the Unit who contributed to the data collection and interpretation were Richard Halperin, Mildred Davison and William Spier. Ms. Mary Bay was responsible for the typing and production of the documents. She was assisted by Ms. Bessie Jones.

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INTRODUCTION

This survey of the occupational education delivery services represents an initial step in the development of a Borough-wide plan. The surveys of the boroughs,will provide a solid informational base for effective borough-wide and city-wide planning to insure networks of updated and cost effective career and occupational education services.

Elements which have been included in this study include: a review of population trends in the entire Borough and in the High School population in particular for the period 1976 to present; population flow, (migration and out migration) special geographic features; transportation facilities; labor market information specific to the borough; assessments of the scope and nature of local business. An in-depth study of present facility and training resources has been made. This study provides a basis for assessing the potential training resources within the present school structure, as well as a detailed outline of the present scope of services.

Travel patterns have been studied as a bases for expanding training opportunities to students through more intensive use of quality facilities in the Borough.

Overall, an attempt has been made to assess the adequacy of present training resources, in relation to student and labor market needs. While a precise correspondence between training output and job market openings is neither practical, nor always reliable, a serious attempt has been made to perceive training need within the best available job market information.

GENERAL POPULATION TRENDS - BOROUGH OF QUEENS

Since 1920 Queens has been the fastest growing borough, passing Manhattan in 1960 to become the second most populous borough in the City. Though every racial group is represented, the population of Queens is predominantly white. (In 1970 there were 1,986,473 residents, of whom 85% were white.) In 1950 there were 53,723 blacks and other non-white residents in Queens, comprising 3.46% of the total Queens population.

By 1970, blacks and non-white residents increased to 291,185, or 14.66% of all the residents. (This represents an increase of 237,462 minority people.) The white population within this time period grew from 1,497,126 to 1,695,288, and in 1970 constituted 85% of the total. In view of these population trends, it is resonable to project that the minority population of Queens will continue to grow at a more rapid rate than the white population.

TABLE 1: ETHNIC DISTRIBUTION of the POPULATION of QUEENS--1950-1970

A) *Queens Population* (1950, 1960, 1970)

Year	Minority	%	"Other"	%	TOTAL
1950	53,723	3.46	1,497,126	96.54	1,550,849
1960	154,619	8.54	1,654,959	91.46	1,809,578
1970	291,185	14.66	1,695,288	85.34	1,986,473

B) *Percent Change in Queens*

	Minority	"Other"	TOTAL
1950-1970	+442.01	+13.24	+28.09

Table 11: ETHNIC DISTRIBUTION of the CITY-WIDE POPULATION--1950-1970

A) *City-Wide Population* (1950, 1960, 1970)

Year	Minority	%	"Other"	%	TOTAL
1950	997,731	12.64	6,894,226	87.36	7,891,957
1960	1,682,901	21.63	6,099,083	78.37	7,781,984
1970	2,517,562	31.89	5,377,299	68.11	7,894,861

B) *Percent Change City-Wide*

	Minority	"Other"	Total
1950-1970	+152.33	-22.00	+0.07

Queens Public High School Population

Since 1976, the overall population of the Queens public high schools has decreased by 5.92% from 78,899 to 74,225 students. Population in the academic/comprehensive high schools decreased by 7.26%, while the vocational high school population increased by 4.69%.

In 1976, the vocational high school enrollment accounted for 7.87% of the total Queens high school population; by 1978, however, it accounted for 8.75% of the total.

The minority population in the 20 academic/comprehensive high schools increased from 48.41% in 1976 to 53.98% in 1978 an increase of 5.57%. At present, there are 10 high schools that have a minority population greater than 50%.

The minority population in the 3 Queens vocational high schools has increased from 42.36% in 1976 to 45.21% in 1978; an increase of 2.85%. Aviation HS is the only one to have a minority population of more than 50%.

Queens Private High Schools

There are 24 private schools in the borough of Queens which served a total of 17,600 students in grades 9 through 12 in the 1978-79 school year. This population, if added to the 72,084 enrolled in the academic/comprehensive and vocational high schools and the 2,141 in the independent alternative and special schools, represents 19.17% of all students attending Queens high schools.

TABLE III A

ETHNIC DISTRIBUTION IN QUEENS HIGH SCHOOLS
OCTOBER 1976

	Minority	%	Other	%	Total
August Martin	1,618	97.94	34	2.06	1,652
Beach Channel	1,148	35.18	2,115	64.82	3,263
B. Cardoza	1,610	45.35	1,940	54.65	3,550
Springfield Gardens	2,524	73.46	912	26.54	3,436
John Bowne	2,391	55.14	1,945	44.86	4,336
Francis Lewis	1,317	39.87	1,986	60.13	3,303
Martin Van Buren	1,565	39.06	2,442	60.94	4,007
Forest Hills	1,259	42.53	1,701	57.47	2,960
Wm. C. Bryant	2,086	47.44	2,311	52.56	4,397
Long Island City	889	29.64	2,110	70.36	2,999
Newtown	3,238	62.37	1,954	37.63	5,192
Flushing	1,709	54.34	1,436	45.66	3,145
Far Rockaway	1,100	52.28	1,004	47.72	2,104
Jamaica	1,980	56.22	1,542	43.78	3,522
Richmond Hill	933	33.55	1,848	66.45	2,781
John Adams	1,594	31.66	3,441	68.34	5,035
Grover Cleveland	1,389	26.66	3,821	73.34	5,210
Andrew Jackson	2,795	99.86	4	0.14	2,799
Bayside	1,380	35.15	2,546	64.85	3,926
Hillcrest	1,710	55.09	1,394	44.91	3,104
Total Acad./Comp.	34,235	48.41	36,486	51.59	70,721
Queens	403	31.14	891	68.86	1,294
Aviation	1,731	62.90	1,021	37.10	2,752
Thomas Edison	495	22.92	1,665	77.08	2,160
Total Voc.	2,629	42.36	3,577	57.64	6,206
Middle College	153	51.00	147	49.00	300
Auxiliary Services	896	56.28	696	43.72	1,592
Special Schools	78	97.50	2	2.50	80
GRAND TOTAL	37,991	48.15	40,908	51.85	78,899

TABLE III B

ETHNIC DISTRIBUTION IN QUEENS HIGH SCHOOLS
OCTOBER 1977

	Minority	%	Other	%	Total
August Martin	1,782	98.67	24	1.33	1,806
Beach Channel	1,442	40.27	2,139	59.73	3,581
B. Cardoza	1,518	46.64	1,737	53.36	3,255
Springfield Gardens	2,377	72.03	923	27.97	3,300
John Bowne	2,261	56.82	1,718	43.18	3,979
Francis Lewis	1,237	40.81	1,794	59.19	3,031
Martin Van Buren	1,501	40.50	2,205	59.50	3,706
Forest Hills	1,139	43.67	1,469	56.33	2,608
Wm. C. Bryant	2,027	50.06	2,022	49.94	4,049
Long Island City	1,127	37.07	1,913	62.93	3,040
Newtown	3,277	67.40	1,585	32.60	4,862
Flushing	1,547	54.03	1,316	45.97	2,863
Far Rockaway	1,246	55.80	987	44.20	2,233
Jamaica	1,919	58.42	1,366	41.58	3,285
Richmond Hill	1,135	39.95	1,706	60.05	2,841
John Adams	1,989	39.03	3,107	60.97	5,096
Grover Cleveland	1,430	31.28	3,141	68.72	4,571
Andrew Jackson	2,531	99.96	1	0.04	2,532
Bayside	1,541	39.74	2,337	60.26	3,878
Hillcrest	1,730	55.84	1,368	44.16	3,098
Total Acad./Comp.	34,756	51.40	32,858	48.60	67,614
Queens	450	34.51	854	65.49	1,304
Aviation	1,803	63.71	1,027	36.29	2,830
Thomas Edison	558	23.31	1,836	76.69	2,394
Total Voc.	2,811	43.06	3,717	56.94	6,528
Middle College	216	52.30	197	47.70	413
Auxiliary Services	966	60.79	623	39.21	1,589
Special Schools	190	100.00	0	0	190
GRAND TOTAL	38,939	51.01	37,395	48.99	76,334

TABLE III C

ETHNIC DISTRIBUTION IN QUEENS HIGH SCHOOLS
OCTOBER 1978

	Minority	%	Other	%	Total
August Martin	2,007	38.92	28	1.38	2,035
Beach Channel	1,438	41.03	2,067	58.97	3,505
B. Cardoza	1,393	45.40	1,675	54.60	3,068
Springfield Gards.	2,397	74.33	828	25.67	3,225
John Bowne	2,198	57.11	1,651	42.89	3,849
Francis Lewis	1,358	45.22	1,645	54.78	3,003
Martin Van Buren	1,455	42.48	1,970	57.52	3,425
Forest Hills	1,112	46.39	1,285	53.61	2,397
Wm. C. Bryant	1,991	51.80	1,853	48.20	3,844
Long Island City	1,355	41.10	1,942	58.90	3,297
Newtown	3,245	69.34	1,435	30.66	4,680
Flushing	1,485	54.18	1,256	45.82	2,741
Far Rockaway	1,413	62.38	852	37.62	2,265
Jamaica	1,844	58.45	1,311	41.55	3,155
Richmond Hill	1,279	46.59	1,466	53.41	2,745
John Adams	1,972	41.02	2,835	58.98	4,807
Grover Cleveland	1,352	33.67	2,663	66.33	4,015
Andrew Jackson	2,655	100.00	---	0	2,655
Bayside	1,531	41.18	2,187	58.82	3,718
Hillcrest	1,927	61.02	1,231	38.98	3,158
Total Acad./Comp.	35,407	53.98	30,180	46.02	65,587
Queens	474	36.69	818	63.31	1,292
Aviation	1,757	63.29	1,019	36.71	2,776
Thomas Edison	706	29.07	1,723	70.93	2,429
Total Vocational	2,937	45.21	3,560	54.79	6,497
Middle College	223	52.97	198	47.03	421
Aux. Services	1,011	64.56	555	35.44	1,566
Spec. Schools	150	97.40	4	2.60	154
GRAND TOTAL	39,728	53.52	34,497	46.48	74,225

OCCUPATIONAL EDUCATION SERVICES

The delivery system for Occupational Education in the borough of Queens consists of programs designed to provide various levels of skills training to high school students, out-of-school youth and adults. Day high school programs are offered in all the twenty academic/comprehensive and the three vocational high schools. Students seeking training not available in their high schools are given the opportunity to receive training in select areas through the Shared Instruction Program or the After School Occupational Skills Program.

DAY HIGH SCHOOLS

In the 1978-79 school year the twenty-three schools served a population of 72,084 secondary students and 2,141 students enrolled in the alternative school, special schools and auxiliary services for a total population of 74,225. Of the total Queens secondary population 29,317 (39%) received occupational training in at least one of the seven occupational clusters (enrollments by cluster may be found in TableIV , pp. 9). 24,275 students received occupational training in the academic/comprehensive high schools; approximately 19,880 of those in the academic schools were enrolled in the Business and Distributive Education cluster.

Approximately 5,042 students received occupational training in the three Queens vocational schools; 3,935 of these were enrolled in the programs in the Trade/ Industry cluster.

The twenty academic/comprehensive high schools offered occupational training to 24,275 (37%) of the 65,587 students registered. Percentages of students receiving occupational education in the individual schools ranged from 19% at Beach Channel High School to 55% at Andrew Jackson High School (see Table V)

VOCATIONAL SCHOOLS

A total of 6,497 students (grades 9 through 12) or 8.75% of the Queens high school population was enrolled in the Queens vocational high schools in 1978. Only one borough in the city serves a smaller proportion of the total student population than does Queens. Judging by student demand, and local employment opportunities it is reasonable to assume that many students who would benefit from occupational training are not now being served. The extent of present limitations and projections of labor market need should serve as the basis for developing specific plans for expansion.

The vocational high schools in Queens—Aviation, Thomas Edison and Queens Vocational—are all overutilized. At Queens Vocational High School, the problem is exacerbated by a small and outdated plant, long overdue for modernization. Queens Vocational High School was built in 1920. It lacks a cafeteria and a gymnasium. In addition, many shop facilities are inadequate and outdated. Since Aviation High School primarily offers courses related to the aviation trades, the demand for the balance of the Trade/Industry courses falls to the two multi-trade vocational high schools and the 2 academic high schools which now offer limited programs in Trade/Industry subjects.

The demand for these subjects far out-weighs their availability in Queens.

The inability to meet the demand for Trade/Industry subjects is evidenced by the following facts: this year Queens Vocational High School rejected 48 applicants for the Electrical Installation and Practice Program, 30 applicants for the Radio & TV Program, 256 applicants for the Computer Technology Program, and 26 applicants for the Beauty Culture (cosmetology) Program; Thomas Edison will reject 197 applicants for the Automotive Program, 31 applicants for the Electrical Installation Program, 4 applicants for the Climate Control Program, and 283 applicants for the Electronics Program.

COMPREHENSIVE HIGH SCHOOLS

Queens has a number of high schools that can be considered comprehensive based on shop facilities. Among these schools are August Martin, John Bowne, Francis Lewis, W.C. Bryant, Hillcrest and Beach Channel.

While these schools offer a variety of occupational courses, the facilities necessary for trade and technical programs remain essentially underutilized. Together these six schools served only 67 students in trade and technical subjects. It should be noted that these schools provided occupational instruction to 478 students in the Industrial Arts and Home Economics* area. However, these students often are enrolled in double period classes for one year or less.

Inadequate staffing, the absence of course standardization and inflexable student programming contribute to the limited utilization of shop facilities in trade/industry and technical subjects. The problem of student programming may be a serious obstacle in developing quality occupational programs in the comprehensive high schools. Students are often not identified and programmed through a logical sequence of related subjects, even when they express an interest in doing so. In addition, few courses are offered for double periods and none are offered for triple periods as they would be in a vocational high school. The flexibility necessary for programming of double and triple periods for vocational students is possible within State and City requirements for graduation. However, none of the Queens comprehensive high schools has chosen this alternative to develop occupational concentrations in the trade/industry and technical areas. Students are at present not being scheduled for multiple periods of instruction because they are required by the school to take subjects in excess of those needed for graduation.

In the clusters of Home Economics, Industrial Arts, Trade/Industry and Technical subjects the enrollments in the six selected Queens comprehensive high schools totalled only 545.

There is little doubt that more students could be served in these facilities. This would require the addition of staff, standardized course curricula, signature programs, supportive student programming consistent with actual state and city diploma requirements.

Table VI details occupational enrollments by cluster for selected Queens comprehensive high schools.

SHARED INSTRUCTION PROGRAM (SIP)

The Shared Instruction Program provides opportunities for students to receive occupational training in areas which are not available in their home schools. Students travel to and take advantage of an instructional program offered at another high school during the regular school day.

At present, only three Queens schools are open to students in the Shared Instruction Program: Aviation, Thomas Edison and August Martin. Together these schools served 269 SIP students in the fall of 1978. 242 or 90% of the SIP students are registered at other Queens high schools However, 59 Queens high school students traveled out of the borough to receive Shared Instruction. While there are opportunities for employment in the career areas of Health, Electronics and Service occupations, many schools in Queens are unable to accomodate students seeking training in these areas. Many students desiring such instruction must seek appropriate training in other, often outside of the borough. Supervisors of Shared Instruction have indicated that there are unmet needs in the following areas:

Cosmetology	Radio & TV Electronics
Automotive	Child Care
Practical Nursing	Food Service
Dental Laboratory Practice	Computer Technology
Office Machine Operation/Repair	Commercial Art
Commercial Photography	

Schools with training facilities which might meet these training needs but do not receive SIP students include: Hillcrest HS, Beach Channel HS and Francis Lewis HS. The resources of Queens Vocational HS for use on a shared time basis are being explored for the September, 1979 school semester.

AFTER SCHOOL OCCUPATIONAL SKILLS PROGRAM (ASOSP)

The After School Occupational Skills Program provides opportunities for "disadvantaged" high school students to acquire entry-level skills in select occupational areas. Instruction is offered to students after the regular school day, on Saturdays, and/or in the summer on an open entry-open exit basis.

The ASOSP served 684 Queens students during the summer of 1978 and 629 during the fall term. No eligible students were rejected from the program. However, general population students are not eligible for the program because they do not qualify as "disadvantaged".

Schools hosting After School Programs in the 1978-79 school year are: John Adams, Springfield Gardens, Beach Channel, Francis Lewis, Far Rockaway, Thomas A. Edison, and Aviation High Schools.

With 61% of the borough's high school students not enrolled in any type of occupational education courses, the need for alternative programs such as ASOSP is considerable.

TABLE IV

OCCUPATIONAL ENROLLMENTS IN QUEENS' HIGH SCHOOLS*

(by Cluster/School)
October 1978

School	Ag.	Business &** Dist. Ed.		Health	Home Economics	Industrial Arts	Trade Industry	Tech.	TOTAL
ACAD/COMP HS's									
August Martin		566	(320)	126			20		466
Beach Channel	92	882	(500)	21	31		37	10	691
Benjamin Cardoza		1,542	(880)	350					1,230
Springfield Gardens		1,624	(930)	100					1,030
John Bowne	358	2,073	(1,180)	32		105			1,675
Francis Lewis		1,418	(810)	128	120				1,058
Martin Van Buren	290	2,051	(1,170)	89	52	75			1,676
Forest Hills		1,390	(790)	144					934
William C. Bryant		2,280	(1,300)	25	51	171			1,547
Long Island City		2,881	(1,640)						1,640
Newtown		1,526	(870)	350	59	48			1,327
Flushing		1,028	(590)	120	26	47			783
Far Rockaway		760	(430)	172		158			760
Jamaica		1,868	(1,070)	229					1,299
Richmond Hill		2,368	(1,350)						1,350
John Adams		2,645	(1,510)	132					1,642
Grover Cleveland		3,095	(1,770)						1,770
Andrew Jackson		1,739	(990)	180	189	98			1,457
Bayside		1,999	(1,140)						1,140
Hillcrest		1,122	(640)	160					800
TOTAL ACAD/COMP. HS's	740	34,857	(19,880)	2,358	528	702	57	10	24,275

TABLE IV

OCCUPATIONAL ENROLLMENTS IN QUEENS' HIGH SCHOOLS* (Cont'd)

School	Ag.	Business & Dist. Ed.		Health	Home Economics	Industrial Arts	Trade Industry	Tech.	TOTAL
VOCATIONAL HS's									
Queens		949	(240)	108			594	128	1,070
Aviation							2,092		2,092
Edison		___		___			1,249	631	1,880
TOTAL VOCATIONAL HS's		949	(240)	108			3,935	759	5,042
GRAND TOTALS	740	35,806	(20,120)	2,466	528	702	3,992	769	29,317

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* These figures do not include those students enrolled in Exploratory courses. See table X.

** Most Business and Distributive Education students are enrolled in more than one course. The number in parenthesis represents an extimated unduplicated student count.

TABLE V

PERCENTAGE OF STUDENTS RECEIVING OCCUPATIONAL EDUCATION
IN QUEENS ACADEMIC/COMPREHENSIVE HIGH SCHOOLS

(By Schools - October, 1978)

SCHOOLS	OCC. ED. REGISTER	TOTAL REGISTER	%
August Martin	466	2,035	22.90
Beach Channel	691	3,505	19.71
Benjamin Cardozo	1,230	3,068	40.09
Springfield Gardens	1,030	3,225	31.94
John Bowne	1,675	3,849	43.52
Frances Lewis	1,058	3,003	35.23
Martin Van Buren	1,676	3,425	48.93
Forest Hills	934	2,397	38.97
William C. Bryant	1,547	3,844	40.24
Long Island City	1,640	3,297	49.74
Newtown	1,327	4,680	28.35
Flushing	783	2,741	28.57
Far Rockaway	760	2,265	33.55
Jamaica	1,299	3,155	41.17
Richmond Hill	1,350	2,745	49.18
John Adams	1,642	4,807	34.16
Grover Cleveland	1,770	4,015	44.08
Andrew Jackson	1,457	2,655	54.88
Bayside	1,140	3,718	30.66
Hillcrest	800	3,158	25.33
TOTAL	24,275	65,587	37.01

TABLE VI

OCCUPATIONAL ENROLLMENTS for SELECTED QUEENS COMPREHENSIVE HIGH SCHOOLS

October 1978

School	Ag.	Business & Dist. Ed.**	Health	Home Economics	Industrial Arts	Trade Industry	Tech.	TOTAL
August Martin		320	126			20		466
Beach Channel	92	500	21	31		37	10	691
John Bowne	358	1,180	32		105			1,675
Francis Lewis		810	126	120				1,058
W.C. Bryant		1,300	25	51	171			1,547
Hillcrest		640	160					800
TOTAL by Cluster	450	4,750	492	202	276	57	10	6,237

*Estimated Number of Unduplicated Students

TABLE VII

After School Occupational Skills Program
(ASOSP)
QUEENS
1978

COURSE	SCHOOL	JULY	OCT.	TOTAL
Horticulture	Springfield Gardens	--	18	18
Typing	J. Addams	48	32	80
	Springfield Gardens	30	15	45
	Beach Channel	--	28	28
	F. Lewis	--	30	30
Key Punch, Data Processing Computer Processing	T. Edison	23	22	45
Medical Typing	Far Rockaway	--	14	14
Office Skills & Management	J. Adams	29	--	29
Bookkeeping, Speedwriting & Stenography	J. Adams	24	15	39
Medical Lab. Technology	Far Rockaway	19	21	40
Nursing Skills	Far Rockaway	--	8	8
	J. Adams	--	32	32
Carpentry/Woodworking	Springfield Gardens	41	22	63
	F. Lewis	31	20	51
Automotive Trades	F. Lewis	26	24	50
	T. Edison	20	25	45
	Springfield Gardens	33	10	43
Graphic Arts/ in Plant Printing	F. Lewis	28	30	58
	Beach Channel	30	17	47
Aircraft Trades	Aviation	147	77	224

TABLE VII (Continued)

COURSE	SCHOOL	JULY	OCT.	TOTAL
Photography	F. Lewis	—	30	30
Tailoring & Dressmaking	J. Adams	—	20	20
Marine Technology	Beach Channel	30	58	88
Small Engine Repair	Aviation	42	36	78
Electrical Trades	Aviation	28	20	48
Metal & Machine Shop	Springfield Gardens	—	17	17
Set Design & Stagecraft	Springfield Gardens	—	20	20
	Beach Channel	—	23	23
	Totals	629	684	1,313

MATCHING TRAINING RESOURCES TO EMPLOYMENT OPPORTUNITY

It is the purpose of this survey to develop the basis for improving the scope and quality of present occupational services in Queens. In addiition to such factors as student interest and need, employment opportunity in each of the seven major occupational clusters must be weighed. Labor market trends in each of these clusters are summarized as follows:

AGRICULTURE AND RELATED CLUSTERS

There are in Queens 253,000 individually owned one and two-family houses accounting for 44% of the total housing. In addition, Queens has large areas of parks and cemeteries which provide opportunities for employment in ornamental horticulture and landscaping. To the east lies Nassau county with a preponderance of one family housing, parks and public institutions. Within the borough Queens has 6,474 acres of park land, a wild life refuge and 38 miles of parkways which provide additional employment opportunities for ornamental horticulture. Advanced studies in agriculture and related courses are available in the Farmingdale Agricultural and Technical College (a 2 year SUNY institution) located approximately twenty miles from Queens. Listings of sixty-one landscaping contractors can be found in Queens with an additional two hundred two in Nassau.

Instructional Programs

Programs in the Agricultural cluster offered in Queens include: Animal Care, Agricultural Production/Farm Mgt., Conservation, Oceanography, and Ornamental Horticulture.

A total of 740 students was enrolled in these courses.

Animal care and Agricultural Production/Farm Management were offered at John Bowne High School.

Conservation was offered at Martin Van Buren, and Oceanography was offered only at Beach Channel High School.

Ornamental Horticulture was offered in John Bowne and Martin Van Buren High Schools. These schools serve a total of 267 students.

SUMMARY - Agricultural Occupations

Agricultural offerings in Queens are available in threee high schools: Beach Channel, John Bowne and Martin Van Buren. None of these facilities is at present opento students from other Queens schools via Shared Instruction or ASOSP. Springfield Gardens High School, however, served 18 students in Ornamental Horticulture through ASOSP. Students in other Queens high schools seeking these programs on a shared basis can be served only through the SIP Ornamental Horticulture Program at Thomas Jefferson High School in Brooklyn.

BUSINESS AND DISTRIBUTIVE EDUCATION

BUSINESS EDUCATION

Twenty-eight percent of Queens workers are employed in clerical and related jobs, a higher percentage than in each of the other boroughs. It is estimated that 40% of the labor force commutes daily to Manhattan while much of the remaining 60% works either in Queens or neighboring communities such as Brooklyn or Nassau.

Instructional Programs

Courses in Business and Distributive Education are usually five periods per week. Students often attend more than one of these subjects per term, and therefore enrollments tend to be duplicative. The total enrollment for the Business and Distributive Education Cluster (20,120) therefore does not represent the sum of the individual subject enrollments.

Bookkeeping and Accounting was offered to 12,308 students in 21 high schools including Queens Vocational High School while Stenography was provided for 4,194 students in all but two of these schools.

General Office/Clerical/Typing was available in 20 schoolsincluding Queens Vocational High School and last year served a total of 12,961 students General Office/Typing was affected through the ASOS program at John Adams, Springfield Gardens, Beach Channel, Francis Lewis, serving 105 in the fall of 1978. Data Processing was taught to 1,243 students at 12 Queens high Schools. August Martin received 34 students from Springfield Gardens via the Shared Instruction Program. Bookkeeping and Accounting, Data Processing, General Office/Typing and Stenography were provided in a number of Queens schools.

DISTRIBUTIVE EDUCATION

The most important single industry in the Borough of Queens is Aviation. The airports employ about 50,000 people and the number grows steadily. Trade areas related to aviation such as hotels/motels, car rentals, travel agencies and air freight distribution are also growing. Rail trucking is another important source of opportunity for employment.

Queens is dotted with substantial commercial areas such as Jamaica (3rd largest in the metropolitan region), Flushing, Rego Park and Steinway Street in Astoria. In addition, Queens has numerous smaller shopping centers, the largest located on Queens Blvd. There are also 346 banking offices.

Instructional Programs

Programs in Distributive Education are relatively scarce in Queens. Finance and Credit, Home Furnishings, Insurance, Real Estate, Recreation and Tourism, Service Station Merchandising, Supermarket Merchandising and Transportation Services are not offered in any Board of Education programs in Queens. The absence of these programs is significant in light of the large number of people in Queens employed in these job areas. Advertising Services courses are offered at Jamaica and Benjamin Cardozo High Schools to 34 and 46 students respectively.

General Merchandising is taken by 183 students in two Queens high schools. They are: Benjamin Cardozo and Long Island City. No programs in Distributive Education are offered either in the ASOSP or the SIP in Queens.

SUMMARY - Business/Distributive Education

Employment in business-related jobs is very high in the Queens labor force, (28% of those employed), and the high schools in general seem to be meeting the demand for this type of instruction. On the other hand, the availability of Distributive Education programs in Queens does not appear to be sufficient in light of the large number of perrsons currently employed and future job projections in this area. Programs in Finance and Credity, HOme Furnishings, Insurance, Real Estate, Service Station Merchnadising, Supermarket Merchandising and Transportation & Services might be justifiably expanded.

For a borough with 16,000 acres of parkland (almost as large as the other four boroughs combined) and 4.5 miles of Rockaway Beach front currently being developed by the National Parks Service, the availability of only one program in Recreation at Newtown High School (serving twenty-nine students) may be less than adequate.

In view of the fact that Bookkeeping, General Office/Typing and Stenography are offered at 17 academic/comprehensive high schools in Queens, it would appear that sufficient opportunity is being provided within the borough for local students. In contrast, however, there is substantial evidence that programs in trade and industry clusters (confined essentially to the two multi-trade vocational high schools) fall far short of student demand and need. The inevitable question which arises is whether the use of the limited and sorely taxed facilities at Queens Vocational HS for Business courses already offered in so many alternate facilities in the borough is justifiable or prudent.

HEALTH

Queens has twenty-three hospitals: nine voluntary, nine proprietary, 2 municipal, 2 state and one federal. There are fourteen Health-related firms in Queens with 500 or more employees. In addition, there are more than forty nursing homes and related health facilities in Queens.

For this potentially large number of employment openings in the health careers, Queens schools trained 2,466 students in health-related occupations.

Instructional Programs

Practical Nursing was offered at Hillcrest and Queens Vocational High Schools, serving 48 and 51 students respectively. Queens Vocatonal High School was able to accept only 41 of the 195 initial applicants for this year's Practical Nursing Program. Dental Assistant was offered exclusively at Hillcrest High School while Dental Laboratory Assistant was not offered anywhere in Queens. While the placement prospects for practical nursing high school graduates are dim, there would appear to be a major need for guidance services to help redirect students interested in health careers into related skills areas.

This year, an Emergency Medical Technology Program was offered at Far Rockaway High School serving 35 students. It is the only school in Queens where such a course exists.

SUMMARY - Health Careers

Many Queens workers are employed in health related areas. Courses in Practical Nursing in Hillcrest High School and Queens Vocational High School are over-subscribed with the result that many students cannot be accommodated. Diverse options should be considered.

HOME ECONOMICS OCCUPATIONAL

The Home Economics Occupational cluster includes: Food Services, Clothing Services and Child Care Services.

Food services provide many employment opportunities in Queens. Queens has 2,781 eating and drinking establishments. Jobs in the clothing industry are concentrated in the Long Island City areas and Manhattan.

Instructional Programs

A total of 11 occupational programs within the home economics cluster served 528 students in the fall term of the 1978-79 school year. Seven of the twenty-three high schools offered occupational education in Food Services. Together they served approximately 349 students. Occupational courses in Clothing Services were provided for 83 students at Martin Van Buren, Newtown and Andrew Jackson High Schools. Child Care Services was provided for 96 students by Andrew Jackson High School.

In the fall term of the 1978-79 school year, 3,166 students were enrolled in 5 period per week Home Economics courses in 15 Queens high schools (see Table VIII) These programs are not defined as occupational because they do not meet for a minimum of 10 periods per week.

SUMMARY - Home Economics Occupational

It would appear from the offerings in the Home Economics cluster that most Queens students seeking occupational training in the area would be compelled to travel to a school outside of Queens.

Some existing facilities might be capable of supporting additional occupational offerings with minor modernization and updating.

INDUSTRIAL ARTS

Industrial Arts facilities are available in Queens high schools for courses in electricity/electronics, graphic arts, mechanical drafting, metalworking, plastics, transportation, woodworking, small engine repair, marine technology, aerospace, multi-media, driver education, photography and electro-mechanical repair.

While these facilities are electives found in many schools, most programs meet only five periods per week. A handful meet the criteria for "occupational". Schools offering occupational courses of 10 periods per week or more include:

John Bowne - woodworking and multi-media

Andrew Jackson - metalworking and woodworking

William C. Bryant - graphic arts, metalworking, plastics and woodworking

Far Rockaway - mechanical drafting, woodworking and transportation

Martin Van Buren - Transportation

Newtown - Mechanical drafting

Flushing - Transportation and woodworking.

The ASOSP offers a course in small engine repair at Aviation High School. In addition to the 10 pd/week "occupational" offerings, Industrial Arts shops in Queens schools provide instruction in a variety of subject areas for 5 periods per week. In the fall 1978-79 school year 10,143* Queens students were enrolled in 5 period/week peograms in Industrial Arts (see Table IX). While most of these I.A. programs are electives not designed to provide entry level skills, it must be noted that many students who elect to take 3 or 4 terms of instruction in one area may indeed be acquiring marketable skills. In addition, many of these 5 pds/week courses serve as prerequisites for more intensive training that is offered for 10 pds/week.

Industrial Arts, JHS

There are a total of 178 Industrial Arts facilities in 39 of the borough's intermediate and junior high schools. These facilities could be used to provide experiences and information that would help students make informed decisions regarding occupational choices on the high school level.

A thorough analysis of feeder patterns, the upgrading of select facilities, the co-ed programming of all JHS I.A. programs and the preparation of informative career and educational literature for distribution to interested students in appropriate subject areas are needed to improve the junior high school stage of the K-12 delivery system of occupational education.

Industrial Arts facilities in Queens junior high and intermediate schools are:

Woodworking	38	Crafts	8
Metalworking	39	Drafting	1
Graphic Arts	37	Gen. Industries	1
Ceramics	35	Environmental	1
Electricity	26	Aerospace	1
Plastics	3		

Total I.A. facilities in 39 Queens Intermediate and Junior High Schools: 178
Number of Facilities not in use as of 3/78: 29

* Includes Driver Education enrollments.

Driver Education

Driver education programs provide students with a skill that is often a condition for employment, especially in the service occupations.

In spite of the value of driver education, the program in our city's schools has steadily declined since 1975 when funding by the Federal Highway Safety Agency was withdrawn. At present much of the equipment (with an estimated value of one million dollars of federal funds) is not in use.

The decline of the city-wide driver education effort is reflected in the decreased driver education enrollments in Queens high schools from 1974 to 1978.

QUEENS DRIVER EDUCATION ENROLLMENTS
Fall 1974 vs. Fall 1978

	Enrollment Fall 1974	Enrollment Fall 1978
John Bowne	220	62
Francis Lewis	110	62
Hillcrest	100	32
Andrew Jackson	36	16
Thomas Edison	60	45
Grover Cleveland	100	0
Springfield Gardens	220	0
Jamaica	220	0
Total	1,066	217

At present, Jamaica High School and Springfield Gardens High School have sixteen position driver simulation trainers not in use. The value of this equipment is in excess of $120,000. Conceivably students at vocational high schools would benefit from this equipment and training.

Instructional costs could be covered by offering the 3-6 hours of in-car instruction with teachers paid on a per-session basis. This would hold down teacher costs, while providing services to those students for whom a driver's license is a condition of employment.

TRADE AND INDUSTRY

The Airports are the single most important industry in the borough employing 50,000 people. Other industrial enterprises, primarily centered in Maspeth and Long Island City, employ approsimately 16,000 persons. Metal, wholesale and electrical industries each employ about 10% of the total work force, followed by food, rail, trucking and precision instruments. Queens has 81 manufacturing and 35 transportation and utility companies employing over 500 persons each. In addition there are 892 automotive service establishments and 135 dental laboratories located in Queens.

Instructional Programs

Queens high schools offered instruction in Trade and Industry subjects to 3,992 students during the fall, 1978 school term. Distribution of trade and industry students in Queens high schools is as follows:

Aviation	2,092	T. Edison	1,249
Queens	594	Beach Channel	37
August Martin	20		
		TOTAL	3,992

The three vocational high schools provided instruction in trade and industry subjects to 3,935 students. Twenty-seven of the students came from outside Queens via the Shared Instruction Program; only 57 students received instruction in trade and industry subjects in Queens' academic/comprehensive high schools. Of the forty-six subjects listed in the trade and industry cluster, only 17 are available in Queens schools. Some of the trade and industry courses not available include:

Clock and Watch Mech.	Ground Support Tech. Maintenance
Commercial Photography	Costume Design
Dental Lab Processing	All 7 courses related to the fashion ind.
T.V. Broadcasting	Baking
Auto Heating Mech.	Cafeteria and Catering
Upholstery	Interior Design
Optical Mechanics	

Students desiring instruction in these programs must seek facilities in other boroughs. 39 Queens students did travel outside their boroughs via the Shared Instruction program during the fall 1978-79 school term for specific Trade and Industry programs.

SUMMARY - Trade and Industry

Trade and Industry offerings in Queens appear to be insufficient to meet student demand.

Students from Queens high schools repeatedly request Shared Instruction programs in Cosmetology, Dental Laboratory Practice, Radio and T.V. Repair, Commercial Art, CommercialPhotography and Office Machine Repair. These programs are not offered in Shared Instruction program because facilities are not available. Students desiring these subjects must travel to other boroughs, and many probably remain unserved.

Because of the limited facilities for Trade and Industry courses in Queens, alternative programs such as SIP and ASOSP are taking up some of the slack.

Fuller utilization of present facilities in all schools is necessary if the expansion of courses in this cluster is to take place.

TECHNICAL

Industries employing persons with technical knowledge are numerous in Queens. The aviation industry, the electronics industry and various utilities are only a few examples.

Instructional Programs

Eight technical programs were offered to 769 students in Queens high schools during the fall of 1978. Six of these courses were offered by Thomas Edison High School. These include: Exploratory, Chemical Tech.,Pre-Technical Engineering, Computer Tech., Electronics and Machine Design. Courses in Drafting and Computer Tech. were provided by Beach Channel HS, and Queens Vocational HS respectively. Seven of the technical courses listed in the technical cluster were not offered by any Queens high school during the 78-79 school year.

TABLE VIII

HOME ECONOMICS ENROLLMENTS in the BOROUGH of QUEENS

5 Periods per Week

Course Offerings	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOWNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
Clothing 1		29			35	21	28		68	50	29	23	53	86		60		92	49	63	
2		22				21				17											
3																		25			
Total Clothing		51			35	42	28		68	67	29	23	53	86		60		117	49	63	771
Foods 1		66		60	91	62	90		123	72		76	110	98		63		80	50	53	
2		32			22	64	61		68	16		30	26			30		17			
Total Foods		98		60	113	126	151		191	88		106	136	98		93		97	50	53	1460
Child Care 1				64			36			99				43				89			
2				33																	
Total Child Care				97			36			99				43				89			364
Other:																					
Family Living 1							71											100	30		
Needle Crafts 2																		32			
Total Family Living							71											132	30		233
Needle Crafts											30		24							32	86
Home Nursing 1																		60			
2																		30			
Total Home Nursing																		90			90

TABLE VIII (Continued)

HOME ECONOMICS ENROLLMENTS in the BOROUGH of QUEENS

5 Periods per Week

Course Offerings	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOWNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
Bach. Survival		67																			67
Health Care		8																			8
Elem. Homemaking											87										87
TOTAL 5 Pd/Wk HOME ECONOMICS	0	224	0	157	148	168	286	0	259	254	146	129	213	227	0	153	0	525	129	148	3166

TABLE IX

INDUSTRIAL ARTS ENROLLMENTS in the BOROUGH of QUEENS

5 Periods per Week

Course Offerings		THOMAS EDISON	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOSNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
Aero Space	1																		32				
	2																		32				32
Total Aero Space																							
Drafting	1			91	100	60	129	31		39			99	57		32	57	56		139	68			
	2				29					28			77				32	68			32	64		
	3												59				18	30		30		28		
	4												48					36						
Total Drafting				91	129	60	129	31		67	37		283	57		32	107	190		169	100	92		1,574
Driver Education		45					62	62												16		32		217
Electricity/Electronics	1		32				31	29					85			60		33	30		61	57		
	2		70																		26			
	3																				28	19		
	4																				28			
Total Elec./Elec.			102				31	29			97		85			60		33	30		143	76		686
Graphic Arts	1		68	81	95	30	31		29		21		18									28		
	2				27	26																		
	3			12	21																			
	4																							
Total Graphic Arts			68	93	143	56	31		29		21		18								29	28		516

TABLE IX (Continued)

INDUSTRIAL ARTS ENROLLMENTS in the BOROUGH of QUEENS

5 Periods per Week

Course Offerings		THOMAS EDISON	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOWNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
Industrial Careers																							
Industrial Ceramics	1						101		68										72				
	2						64												31				336
Total Ceramics							165		68										103				
Jewelry	1						28				23				58			67				30	
	2																						
	3																						
	4																						
Total Jewelry							28				23				58			67				30	206
Marine Technology	1																						
	2																						
	3																						
	4																						
Total Marine Technology																							0
Metal Working	1				114	29	115	92	29	59	72	162	88	23	117	36		78	26	46	83	45	
	2				20			26		22								35				28	
	3									35											22		
	4																						
Total Metal					134	29	115	118	29	116	72	162	88	23	117	36		113	26	46	105	73	1,402
Multi-Media							27																27
Photography	1	33	21		50	59	30	92						56					76			62	
	2													16					35				
	3																						
	4																						
Total Photography		33	21		50	59	30	92						72					111			62	530

TABLE IX (Continued)

INDUSTRIAL ARTS ENROLLMENTS in the BOROUGH of QUEENS

5 Periods per Week

Course Offerings		THOMAS EDISON	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOWNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
Plastics	1	109	124			63				48		112			89						26	
	2																					
Total Plastics		109	124			63				48		112			89						26	571
Transportation	1		140	67	29		62	64			88	182	65	29	85						46	
	2		104				24				21	68	20								55	
	3												23									
	4																					
Total Transportation			244	67	29		86	64			109	250	108	29	85						101	1,172
Small Engine Repair	1					36						27						50				
	2																	21				
Total Small Engine Repair						36						27						71		25		159
Woodworking	1	157	23	148	91	143	103	61	83	22	159	140	79	135	94		128	94	45	51	108	
	2		24	27			20		45				11	41			61	32		26	42	
	3																			24		
	4																					
Total Woodworking		157	47	175	91	143	123	61	128	22	159	140	90	176	94		189	126	45	101	150	2,217
Other:																						
Business Career			72																			72
Art Career			33																			33
Arts & Crafts				34																		34
Introduction to Industrial Arts								62					40									102
Home Maintenence					60													27			26	113

TABLE IX (Continued)
INDUSTRIAL ARTS ENROLLMENTS in the BOROUGH of QUEENS
5 Periods per Week

Course Offerings	THOMAS EDISON	AUGUST MARTIN	BEACH CHANNEL	BENJAMIN CARDOZO	SPRINGFIELD GARDENS	JOHN BOWNE	FRANCIS LEWIS	MARTIN VAN BUREN	FOREST HILLS	WILLIAM C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY	JAMAICA	RICHMOND HILL	JOHN ADAMS	GROVER CLEVELAND	ANDREW JACKSON	BAYSIDE	HILLCREST	
OTHER:																						
Electro-Mechanics 1																					52	52
2																					32	32
World of Work				30																		30
Careers. Human Resources Team				30																		30
TOTAL INDUSTRIAL ARTS 5 Pd/Wk	45	469	725	742	375	889	479	405	311	320	430	1003	390	380	396	107	892	526	276	503	780	10,143

Occupational Enrollments in Queens High Schools

(By Course/School)

Oct. 1978

TABLE X

QUEENS

AGRICULTURE	A. MARTIN	BEACH CHANNEL	B. CARDOZO	SPRINGFIELD GDNS.	J. BOWNE	F. LEWIS	M. VAN BUREN	FOREST HILLS	WM. C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY
9th Year Explor. or Pre-Voc.					87								
Agric. Prod./Farm Mgt.					192								
Animal Care					111								
Conservation							78						
Oceanography		92											
Ornamental Horticulture					55		212						
Other													
TOTALS		92			445		290						
BUSINESS & DISTRIBUTIVE ED.													
Business & Office Courses													
Exploratory		71		62			129			76			
Pre-Vocational (Required)		95	196		69		320		562	178		214	
Bookkeeping & Accounting	46	123	544	1025	1278	563	611	422	301	1227	518	353	157
Data Processing	118	81			46	58	105		62	30		68	
Gen. Office/Clerical/Typewriting	331	446	528	484	373	524	599	853	881	833	730	361	547
Information Communications													
Materials Supporting (Transporting, Storing, Recording)													
Stenographic, Secretarial	71	137	143	115	287	157	344	115	227	446	278		56
Supervisory & Administrative Mgt.													
Pre-Technical						36							
Office Related Technology						80	72		18	31			
Other													
TOTAL	566 (320)	953 (570)	1411 (800)	1686 (990)	2053 (1170)	1418 (810)	2180 (1300)	1390 (790)	2051 (1170)	2821 (1640)	1526 (870)	996 (570)	760 (430)
Distributive Ed. Courses												32	
Exploratory													
Pre-Vocational (Required)													
Advertising Services			46										
Apparel & Accessories			38										
Auto/Petroleum/Serv. Station Mgt.													
Finance & Credit													
Food Distrib./Supermarket Mgt.													
Gen. Merch./Gen. Sales			47							136			
Hardware, Materials, Supplies													

Occupational Enrollments in Queens High Schools

(By Course/School)

Oct. 1978

TABLE X (Continued)

QUEENS

BUSINESS & DISTRIBUTIVE ED. (Cont'd) / Distributive Ed. Courses (Cont'd)	A. MARTIN	BEACH CHANNEL	B. CARDOZO	SPRINGFIELD GDNS.	J. BONE	F. LEWIS	M. VAN BUREN	FOREST HILLS	W.C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY
Home Furnishings (Sales)													
Hotel & Lodgings													
Insurance													
Real Estate													
Recreation & Tourism													
Transportation & Services													
Pre-Technical													
Other					20				229				
TOTAL			131 (80)		20 (10)				229 (138)	136 (80)		32 (20)	
TOTAL BUSINESS & DISTRIBUTIVE ED.	566 (320)	953 (570)	1542 (880)	1686 (990)	2073 (1180)	1418 (810)	2180 (1300)	1390 (790)	2280 (1300)	2957 (1720)	1526 (870)	1028 (590)	760 (430)
HEALTH CAREERS													
9th Year or Exploratory								50					
Intro. to Health Careers	75		300	100	32	22	64	33			125	120	77
Med. or Bio. Lab Tech	51	21						17	25		225		35
Dental Assistant													
Dental Lab Assistant													
Dental Office Practices													
Health Assistant/Health Service			50			41	25	25					25
Health Careers for the Handicapped						65							
Medical Lab Assistant													
Medical Office Practices								69					
Nurse Assistant													
Practical Nurse													
Other													35
TOTAL	126	21	350	100	32	128	89	194	25		350	120	172
HOME ECONOMICS													
HEOE Food Services		31				120	24		51		27	26	
HEOE Clothing Services							28				32		
HEOE Child Care Services													
Other													
TOTAL		31			46	120	52		51		59	26	

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X (Continued)

QUEENS

	A. MARTIN	BEACH CHANNEL	B. CARDOZO	SPRINGFIELD GDNS.	J. BOSE	F. LEWIS	M. VAN BUREN	FOREST HILLS	WM. C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY
INDUSTRIAL ARTS													
Aerospace											48		52
Drafting													
Driver Education													
Electricity/Electronics									19				
Graphic Arts													
Industrial Careers													
Industrial Ceramics													
Jewelry													
Marine Technology													
Metalworking									74				
Multi-Media					79								
Photography													
Plastics									24				
Transportation							75					24	70
Small Engine Repair													
Woodworking					26				54			23	36
Other													
TOTAL					105		75		171		48	47	158
TECHNICAL													
9th Year Exploratory or Pre-Voc.													
Aviation: Aeronautics Tech.		10											
Draft'g/Drw'g: Architectural													
Draft'g/Draw'g: Elec. or Mech.													
Chemical Tech (Indus. Chem)													
Civil Tech (Struc. Des.)													
Elect'y/onics: Communications													
Elect'y/onics: Computer Tech.													
Elect'y/onics: Elect'y/onics													
Fashion: Fashion Design Tech.													
Industrial Design													
Instrumentation Design													
Machine Design													
Pre-Technical Engineering													
Other													
TOTAL		10											

Occupational Enrollments in Queens High Schools

(By Course/School)

Oct. 1978

TABLE X (Continued)

QUEENS

TRADE/INDUSTRY	A. MARTIN	BEACH CHANNEL	B. CARDOZO	SPRINGFIELD GDNS.	J. BOWNE	F. LEWIS	M. VAN BUREN	FOREST HILLS	WM. C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY
9th Year Exploratory or Pre-Voc.													
Auto.: Automotive Body													
Auto.: Automotive Mech.													
Auto.: Service Stat. Attend't													
Aviation: Aviation Mechanics													
Aviation: Ground Suppt. Veh. Maint.													
Bldg/Constr: Cabinet Making													
Bldg/Constr: Carpentry													
Bldg/Constr: Plumbing													
Bldg/Constr: Woodworking													
Clock and Watch Mech.													
Commercial Art													
Commercial Photography													
Cosmetology													
Dental Lab Processing													
Elect'y/onics: Elec. Instal & Prac.													
Elect'y/onics: Radio Electr. Mech.													
Elect'y/onics: Radio & TV Mech.													
Elect'y/onics: TV Broadcasting													
Electro-Mech: Appl/Equip. Rpr.													
Electro-Mech: Bus. Machine Rpr.													
Envir. Contr.: Automatic Heating													
Envir. Contr.: Climate Control													
Envir. Contr.: Comm/Domest. Refrig.													
Fashion: Costume Des/Illus/Drap'g													
Fashion: Fashion Design (Voc)													
Fashion: Fashion Merchandising													
Fashion: Fur Mfr.													
Fashion: Men's Clothing Mfr.													
Fashion: Textile Des.& Weaving													
Fashion: Women's Apparel Mfr.													
Food: Baking													
Food: Cafeteria & Catering													
Food: Meat Merchandising													

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X(Continued)

QUEENS

	A. MARTIN	BEACH CHANNEL	B. CARDOZO	SPRINGFIELD GDNS	J. BONNE	F. LEWIS	M. VAN BUREN	FOREST HILLS	WM. C. BRYANT	LONG ISLAND CITY	NEWTOWN	FLUSHING	FAR ROCKAWAY
TRADE/INDUSTRY (Cont'd)													
Graphic Arts & Communication													
Interior Decoration													
Jewelry Design & Mfr.													
Mach/Metal: Machine Shop Prac.													
Mach/Metal: Sheet Metal													
Marine Occupations		16											
Media/TV Production													
Optical Mechanics													
Printing Trades		21											
Sculpture & Stone Carving													
Upholstery													
Other	20												
TOTAL	20	37											
GRAND TOTALS	466	761	1230	1090	1762	1058	1806	984	1547	1720	1327	783	760

Occupational Enrollments in Queens High Schools

(By Course/School)

Oct. 1978

TABLE X (Continued)

QUEENS

	JAMAICA	RICHMOND HILL	J. ADAMS	G. CLEVELAND	A. JACKSON	BAYSIDE	HILLCREST	QUEENS	AVIATION	T.A. EDISON	
AGRICULTURE											
9th Year Explor. or Pre-Voc.											87
Agric. Prod./Farm Mgt.											192
Animal Care											111
Conservation											78
Oceanography											92
Ornamental Horticulture											267
Other											
TOTALS											827
BUSINESS & DISTRIBUTIVE ED.											
Business & Office Courses											
Exploratory	22	377	69		114						920
Pre-Vocational (Required)				93	857		68				2,652
Bookkeeping & Accounting	572	1007	548	1333	137	1229	170	144			12,308
Data Processing	225		57	325			68				1,243
Gen. Office/Clerical/Typewriting	646	918	833	994	459	620	612	389			12,961
Information Communications		55					34				89
Materials Supporting (Transporting, Storing, Recording)								29			29
Stenographic, Secretarial	93	388	423	350		150	170	244			4,194
Supervisory & Administrative Mgt.					59						59
Pre-Technical			620								656
Office Related Technology			33					143			377
Other			131								131
TOTAL	1558	2745	2714	3095	1626	1999	1122	949			35,619
	(900)	(1730)	(1580)	(1770)	(970)	(1140)	(640)	(240)			(20,400)
Distributive Ed. Courses	298				227						557
Exploratory											
Pre-Vocational (Required)											
Advertising Services	34										80
Apparel & Accessories											38
Auto/Petroleum/Serv. Station Mgt.											
Finance & Credit											
Food Distrib./Supermarket Mgt.											
Gen. Merch./Gen. Sales											183
Hardware, Materials, Supplies											

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X (Continued)

QUEENS

	JAMAICA	RICHMOND HILL	J. ADAMS	G. CLEVELAND	A. JACKSON	BAYSIDE	HILLCREST	QUEENS	AVIATION	T.A. EDISON	
BUSINESS & DISTRIBUTIVE ED. (Cont'd)											
Distributive Ed. Courses (Cont'd)											
Home Furnishings (Sales)											
Hotel & Lodgings											
Insurance											
Real Estate											
Recreation & Tourism											
Transportation & Services											
Pre-Technical											
Other											249
TOTAL	332 (190)				227 (130)						1,107 (646)
TOTAL BUSINESS & DISTRIBUTIVE ED.	1890 (1090)	2745 (1730)	2714 (1580)	3095 (1770)	1853 (1100)	1999 (1140)	1122 (640)	949 (240)			36,726 (21,040)
HEALTH CAREERS											
9th Year or Exploratory							61	32			143
Intro. to Health Careers	109		33		150		73				1,313
Med. or Bio. Lab Tech	70		49								493
Dental Assistant							39				39
Dental Lab Assistant											
Dental Office Practices											
Health Assistant/Health Service	20										186
Health Careers for the Handicapped											65
Medical Lab Assistant											
Medical Office Practices								10			79
Nurse Assistant					30						30
Practical Nurse							48	51			99
Other	30		50					47			162
TOTAL	229		132		180		221	140			2,609
HOME ECONOMICS											
HEOE Food Services					70						349
HEOE Clothing Services					23						83
HEOE Child Care Services					96						96
Other											
TOTAL					189						528

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X (Continued)

QUEENS

	JAMAICA	RICHMOND HILL	J. ADAMS	G. CLEVELAND	A. JACKSON	BAYSIDE	HILLCREST	QUEENS	AVIATION	T.A. EDISON	
INDUSTRIAL ARTS											
Aerospace											
Drafting											100
Driver Education											
Electricity/Electronics											
Graphic Arts											19
Industrial Careers											
Industrial Ceramics											
Jewelry											
Marine Technology											
Metalworking					44						118
Multi-Media											79
Photography											
Plastics											33
Transportation											160
Small Engine Repair											
Woodworking					54						193
Other											
TOTAL					98						702
TECHNICAL											
9th Year Exploratory or Pre-Voc.										118	118
Aviation: Aeronautics Tech.											
Draft'g/Drw'g: Architectural											10
Draft'g/Draw'g: Elec. or Mech.											
Chemical Tech (Indus. Chem)										60	60
Civil Tech (Struc. Des.)											
Elect'y/onics: Communications											
Elect'y/onics: Computer Tech.								128		92	220
Elect'y/onics: Elect'y/onics										274	274
Fashion: Fashion Design Tech.											
Industrial Design											
Instrumentation Design											
Machine Design										147	147
Pre-Technical Engineering											
Other										58	58
TOTAL					52			128		749	887

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X (Continued)

QUEENS

TRADE/INDUSTRY	JAMAICA	RICHMOND HILL	J. ADAMS	G. CLEVELAND	A. JACKSON	BAYSIDE	HILLCREST	QUEENS	AVIATION	T.A. EDISON	
9th Year Exploratory or Pre-Voc.								158	684	158	1000
Auto.: Automotive Body										29	29
Auto.: Automotive Mech.										325	325
Auto.: Service Stat. Attend't											
Aviation: Aviation Mechanics									2001		2001
Aviation: Ground Suppt. Veh. Maint.											
Bldg/Constr: Cabinet Making										227	227
Bldg/Corstr: Carpentry											
Bldg/Constr: Plumbing								75		66	141
Bldg/Constr: Woodworking											
Clock and Watch Mech.											
Commercial Art										27	27
Commercial Photography											
Cosmetology								178			178
Dental Lab Processing											
Elect'y/onics: Elec. Instal & Prac.								142		265	407
Elect'y/onics: Radio Electr. Mech.								127			127
Elect'y/onics: Radio & TV Mech.											
Elect'y/onics: TV Broadcasting											
Electro-Mech: Appl/Equip. Rpr.											
Electro-Mech: Bus. Machine Rpr.										66	66
Envir. Contr.: Automatic Heating											
Envir. Contr.: Climate Control										112	112
Envir. Contr.: Comm/Domest. Refrig.											
Fashion: Costume Des/Illus/Drap'g											
Fashion: Fashion Design (Voc)											
Fashion: Fashion Merchandising											
Fashion: Fur Mfr.											
Fashion: Men's Clothing Mfr.											
Fashion: Textile Des.& Weaving											
Fashion: Women's Apparel Mfr.											
Food: Baking											
Food: Cafeteria & Catering											
Food: Meat Merchandising											

Occupational Enrollments in Queens High Schools
(By Course/School)
Oct. 1978

TABLE X (Continued)

QUEENS

	JAMAICA	RICHMOND HILL	J. ADAMS	G. CLEVELAND	A. JACKSON	BAYSIDE	HILLCREST	QUEENS	AVIATION	T.A. EDISON	
TRADE/INDUSTRY (Cont'd)											
Graphic Arts & Communication										68	68
Interior Decoration											
Jewelry Design & Mfr.											
Mach/Metal: Machine Shop Prac.								72		64	136
Mach/Metal: Sheet Metal											
Marine Occupations											16
Media/TV Production											
Optical Mechanics											21
Printing Trades											
Sculpture & Stone Carving											
Upholstery											
Other									91		111
TOTAL								752	2776	1407	4,992
GRAND TOTALS	1319	1730	1712	1770	1567	1140	861	1260	2776	2156	31,595

REFERENCES AND SOURCES OF INFORMATION

- Queens County Overall Economic Development Program
- School Profiles; New York City Board of Education 1976-1977
- Form 11; Analysis of School Organization Register by Courses and Terms; CCOE, New York City Board of Education
- Annual School Census - October, 1977; October, 1978
- Pupil Ethnic Composition Report; Office of Educational Statistics, New York City Board of Education
- Transportation Information; New York City Transit Authority

Information was supplied through the cooperation of the following Offices:

After School Occupational Skills Program

Shared Instruction Program

Home Economics

Industrial Arts

Trade and Technical

Health Careers

Business and Distributive Education